

CLAIMS

1. A method for collecting management information on a communication network, the method comprising the steps of:

obtaining a network technology independent high-level health indicator from a managed network element; and

if details of the high-level health indicator are required, obtaining at least one of a technology independent intermediate-level health indicator and a technology independent raw health indicator related to the technology independent high-level health indicator from the managed network element.

2. The method of claim 1, wherein the technology independent high-level health indicator provides an indication of the health of the managed network element, and wherein the at least one of the technology independent intermediate-level health indicator and technology independent raw health indicator provide information about the health of an aspect of the managed network element.

3. The method of claim 1, wherein a value of the technology independent high-level health indicator is determined from a plurality of raw health indicators.

4. The method of claim 3, wherein the value of the technology independent high-level health indicator is further determined from values of a plurality of intermediate-level health indicators.

5. The method of claim 3, wherein the raw health indicators are defined independent of available measurements on the managed network elements, but are computed from measurements on the managed network elements.

6. The method of claim 5, wherein the raw health indicators are computed from at least one of computed measurements and raw measurements made by the managed network element, the computed measurements and raw measurements being selected to compute the raw health indicator.

7. The method of claim 1, wherein at least one of the technology independent intermediate-level and raw health indicators are maintained by the managed network element and provided on demand to a management station.

8. A network element, comprising:

a processor containing control logic configured to maintain a management information base containing raw measurement information relating to the state of the network element, and configured to implement health definition software configured to compute technology independent raw health indicators from values in the management information base.

9. The network element of claim 8, wherein at least a portion of the raw measurement information contained in the management information base is selected based on definitions associated with the raw health indicators.

10. The network element of claim 8, further comprising at least one network processor configured to process protocol data units on a communication network.

11. The network element of claim 8, wherein the management information base is further configured to contain computed measurement information that may be used to compute the technology independent raw health indicators.

12. The network element of claim 8, wherein the health definition software is further configured to compute technology independent intermediate-level health indicators from the technology independent raw health indicators.

13. The network element of claim 8, wherein the health definition software is further configured to compute technology independent high-level health indicators from the technology independent raw health indicators.

14. A method of defining technology independent health indicators for collecting health information from network elements of diverse technologies, the method comprising the steps of:
defining a high-level health indicator;

determining a set of raw health indicators required to compute the high-level health indicator; and

for each technology, determining a set of at least one of computed measurements and raw measurements required to compute the raw health indicators.

15. The method of claim 14, further comprising the step of determining a set of intermediate-level health indicators required to compute the high-level health indicator.

16. A technology independent health indicator, comprising:

a raw health indicator portion configured to indicate the health of an aspect of a managed network element of a first network technology; and

a high-level health indicator portion derived at least in part from the raw health indicator portion and configured to indicate the health of a managed network element; and

wherein the raw health indicator is defined independent of available measurements on the managed network element, but is computed from measurements on the managed network element.

17. The technology independent health indicator of claim 16, wherein the high level health indicator portion may be used to indicate the health of the managed network element for a plurality of network technologies.

18. The technology independent health indicator of claim 16, further comprising at least one intermediate-level health indicator portion derived at least in part from the raw health indicator portion and configured to indicate the health of a second aspect of the managed network element.

19. The technology independent health indicator of claim 18, wherein the raw health indicator portion is computed from at least one of computed measurements and raw

measurements made by the managed network element, the computed measurements and raw measurements being selected to be made on the network element to compute the raw health indicator.

20. The technology independent health indicator of claim 19, wherein the raw health indicators are independent of a technology type of the managed network element.